



Commodore 64/128

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You're lying in suspended animation on your way home from deep space exploration. As you approach Earth, the temperature in your CryoUnit automatically rises to normal body temperature and when the lid opens you crawl out feeling groggy. Training and habit cause you to immediately glance over at the main computer console for life support status. Then you see the message on the computer monitor - a message from Earth sent months earlier. The shock of it brings you fully alert.

EMERGENCY TRANSMISSION !! EARTH DEFENSE FORCE BULLETIN #GW746 TERRA DATE 1-11-3225

TO:	HELIOS EXPLORATION	STARSHIP
FROM:	DEFENSE COUNCIL	
PRIORITY:	CLASS 1	
TRANSMIT BY:	SECURE DATA LINK	
SITUATION:	CRITICAL	

PLANET EARTH UNDER ALIEN SIEGE. 50 ORBITING WAR FORTRESSES SURROUND US. HEAVILY ARMED, DEFENDED BY MAGNETIC FORCE WEAPONS. EARTH WEAPONRY USELESS. OTHER STARSHIPS OUT-OF-CONTACT, PRESUMED TERMINATED.

YOUR PHOTON FIGHTERS OUR LAST HOPE. URGENTLY REQUEST YOU LAUNCH IMMEDIATELY!

END OF MESSAGE

Fifty alien armed fortresses? Was the Earth destroyed while you slept peacefully? And what good could your Photon Fighters do against those odds? Not much hope of survival. Still, you are a Starship Commander, bound to defend your home planet despite the slim odds of survival.

As you reach for your navigational controls, your ship begins to shudder and your main engines go dead. An intense magnetic force brings your Helios Exploration Starship to a shuddering halt. That was quick. Luckily, your docking motors and emergency systems still function. But your Helios Exploration Starship moves like a slug under docking power and you'll never generate enough power to fire the main phasers. Just as Earth Defense suggested, you'll have to use your on-board Photon Fighters against the alien fortresses. Some combat practice using the Holographic Simulator is first in order. Then at least you'll have a fighting chance as you battle to save the Earth.

How the aliens use their magnetic force fields remains a mystery in your part of the galaxy. This is your final thought as you climb into Photon Fighter 1 and prepare to encounter the unknown.

Magnetron requires the use of a joystick in order to take advantage of all the program's many features.

Before turning on your computer, make sure the SHIFT LOCK key is up and your joystick is in Control Port #2.

Then, proceed as follows:

- Turn on your monitor, disk drive and computer in that order.
- After the "busy" light on your disk drive goes off, insert the Magnetron program disk into the drive and close the drive door.
- Type LOAD "*",8,1 and press RETURN. The program takes approximately one minute to load.

You are now ready to play Magnetron.

Your mission is to destroy the alien fortresses and save the planet Earth from certain annihilation.

The fortresses are heavily armed satellites placed in orbit around the Earth. They possess tremendous amounts of energy which is channeled into a planet-warping magnetic field. Each fortress derives its energy from a Magnetron Generator.

You attack by flying your Photon Fighter over the surface of the fortresses while bombarding the alien's defense cannons with your own particle beam weaponry. If you knock out all the cannons, the Magnetron Generator will short-out and the fortress will be destroyed. When the cannons are firing back at you, you may protect yourself with a shield around your Photon Fighter. Your Photon Fighter *can* withstand a few unshielded hits from the enemy cannons, but it takes a lot of fuel to absorb the energy (2000 units per unshielded hit).

As you fly over the surface of a fortress, the magnetic forces you must contend with can be very unpredictable. The force they generate may push you or pull you, you'll never know until it hits you. Sometimes you may be able to nullify the magnetic force by knocking out the Magnetron Generator itself with a direct hit.

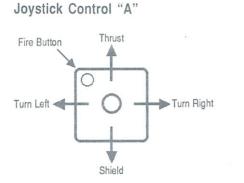
The walls of a fortress also have unpredictable properties. Sometimes your Fighter will bounce off a wall, sometimes it will pass right through a wall. Sometimes when you hit a wall your Fighter will explode from the impact. There's only one way to know what kind of wall you face before it's too late: fire on the wall and see what happens.

CONTROLLING YOUR PHOTON FIGHTER

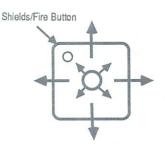
Your Photon Fighter can be controlled using the joystick or keyboard. There are two different ways to control the fighter with the joystick (see diagrams below). To switch between the different control modes, press "A" or "B" on the keyboard during play.

When using control mode "A", direction and thrust are two separate joystick actions. Thrusting will always move you forward in the direction that your fighter is facing.

Control mode "B" incorporates direction and thrust into one joystick movement. Pushing in any of the eight directions will turn your ship and then thrust in that direction.



Joystick Control "B"



Keyboard – Keyboard control emulates joystick control mode "A" where controlling direction and thrust are two separate actions.

Key	<u>Result</u>
(z	Turn Left
Left SHIFT	Turn Right
Right SHIFT	Thrust
CRSR (up/down arrows)	Fire
SPACE BAR or CRSR	Shields
(up/down arrows)	

USING YOUR SHIELDS

Your Photon Shields can stop enemy cannon fire but they will not stop you from exploding if you hit a solid or brittle wall. Shields also consume a lot of fuel, so use them carefully.

REFUELING YOUR FIGHTER

-

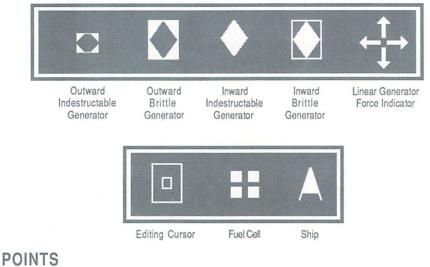
Fuel Cell

To pick up fuel from the surface of the fortresses, you must fly over the fuel cells and activate your shields. The fuel will then be drawn up into your ship. You can have a maximum of 25,000 units of fuel on board. Keep a close eye on your fuel supply. If you run out of fuel, your Photon Fighter will explode.

MAP OF THE FORTRESS

At any time during the game, you can display a map of the entire fortress surface by pressing M on your keyboard. The map allows you to orient yourself and provides a visual indication of the dangers that lie ahead.

The icons below represent the various items you will see displayed on the fortress map. An "Inward" Generator generates an attracting force and an "Outward" Generator generates a repelling force.



PUINTS

There are three ways to score points:

Picking up extra fuel:	15 points for each fuel cell
Knocking-out cannons:	200 points each
Destroying a fortress:	0 to 9000 points, depending on the time it takes you to do it

EXTRA FIGHTERS

You gain an extra Photon Fighter whenever you destroy a fortress.

To start the game, press the joystick button or RETURN key when you are at the "cockpit" screen. The Main Menu will then be displayed. You may use the joystick or SPACE BAR to cycle through the Main Menu options. Pressing the joystick button or RETURN key will then select the option.

MAIN MENU

The following three options are available in the main menu:

Magnetron Galaxy

The Magnetron Galaxy which is contained on the master program disk is comprised of 50 alien fortresses as described throughout this manual. If you wish to battle against fortresses as the aliens originally designed them, select *Magnetron Galaxy* from the Main Menu. You will then go directly to the Combat Menu for further play selections.

If you come back to the main menu after switching galaxies with "Other Galaxy" option, the selection "Magnetron Galaxy " will be replaced by the name of your new galaxy.

Other Galaxy

If you wish to fight in a galaxy comprised of enemy fortresses you or someone else has designed with the Galaxy Editor, select *Other Galaxy* at the Main Menu. You will then be prompted to insert the "Galaxy Disk" which contains your custom galaxy.

After following the screen prompts, you will return to the Main Menu where the name of your custom galaxy has replaced "Magnetron Galaxy." Selecting this galaxy from the Main Menu will then take you to the Combat Menu.

To return to the Magnetron Galaxy, simply select *Other Galaxy* and then insert the Magnetron master disk when prompted for a disk.

Galaxy Editor

Selecting *Galaxy Editor* allows you to construct your own enemy fortresses for a galaxy of your own design. You may construct up to 50 fortresses for your galaxy.

You will need a blank disk on which to store your galaxy. You may store one galaxy on each separate disk. The disk does not need to be pre-formatted.

Aliens do not like Earthlings messing with the designs of their fortresses, so you cannot edit the Magnetron Galaxy in any way. See "CREATING A GALAXY" for more information.

COMBAT MENU

After you select a galaxy from the Main Menu, you will arrive at the Combat Menu. Options are selected from the Combat Menu just as the were in the Main Menu. The following options are available:

Combat

Selecting this option takes you to the Combat Roster sign-in screen. There you may sign in as a new captain or continue to play a game that has previously been saved. See "COMBAT ROSTER" for further information.

Practice

The Holographic Simulator is used to recreate an enemy fortress for battle practice. The Simulator can recreate 49 of the 50 fortresses The last one cannot be simulated. The number (1-49) of the fortress to be simulated is located next to the word "Practice" To select a fortress with a higher number, press the joystick to the right or use the CRSR left/right arrow key. To select a fortress with a lower number, press the joystick to the left or use the CRSR up/down arrow key. You can simulate any base (except the last one) as many times as you like, but you will never save the Earth unless you go into combat.

High Scores

Selecting this option displays a screen listing the highest scores. To clear the list, press CLR/HOME while the list is being displayed. To exit the list, press the joystick button or the RETURN key.

Main Menu

Selecting this option returns you to the Main Menu.

The following list contains special keys that may be used in either the Combat or Simulation modes of the game:

Key Result

- F1 Quitting while in Combat Mode will end your game and save your position on the Combat Roster. You can continue that mission from where you saved it by choosing the mission captain at the Combat Roster.
- F3 aborts a Photon Fighter.
- F5 turns the music on.
- F7 turns the music off.
- M displays a fortress map with your current position while freezing the action. Press the joystick button or RETURN key to exit and return to normal play.
- P pauses the game. Press the joystick button or RETURN key to resume play.

The Combat Roster is where new commanders sign-in and existing commanders resume a mission-in-progress. It is the first screen you come to after selecting *Combat* from the Combat Menu. Each galaxy has its own individual Combat Roster.

When you enter the Combat Roster for the very first time, the list will be blank.

SIGNING-IN

To sign-in, use the joystick or SPACE BAR to move the selection indicator to a blank line and then press the joystick button or RETURN key to select it. Enter your name using the keyboard and then press RETURN to start the game with that captain. If you make a mistake, use the DEL key to delete unwanted letters.

PLAYING A MISSION-IN-PROGRESS

If you would like to resume playing a particular mission, use the joystick or SPACE BAR to move the selection indicator to the appropriate commander's name and then press the joystick button or RETURN key to select it. The mission-in-progress will resume from the point where you left it.

DELETING A COMMANDER

To delete a commander, first use the joystick or SPACE BAR to move the selection indicator to the commander's name that you want to delete, and then press the CLR/HOME key.

WALLS

Fortresses can have four different types of walls. You cannot tell the walls apart visually. The only way to tell them apart is by firing at them and watching the reaction. The four types are:

Solid walls	These walls cannot be destroyed and they will simply absorb your weapon fire. If you touch a solid wall, your fighter will explode.
Permeable walls	Both your weapon fire and your Photon Fighter itself will pass through permeable walls.
Brittle walls	These walls can be destroyed by your weapon fire. If you touch a brittle wall, both it and your fighter will be destroyed.
Elastic walls	Both your weapon fire and your fighter will bounce off of these walls.

THE MAGNETRON GENERATORS

Watch out for the unseen forces from the Magnetron Generators. There are two different types and, like walls, can only be told apart by the properties they exhibit. The two types are:

Linear Generators	Linear Magnetron Generators can create either an attracting or repelling force in one of four directions, over the entire surface of a base. All Linear Generators are hidden and indestructible.
Circular Generators	Circular Magnetron Generators can create either attracting or repelling force from the center of the generator. Some of the these generators can be destroyed.

Selecting *Galaxy Editor* from the Main Menu allows you to create up to fifty enemy fortresses for your very own galaxy. You can also use the Galaxy Editor to go back and modify fortresses that have already been created. You cannot, however, edit the Magnetron Galaxy in any way.

The Magnetron program disk does not have enough room for an additional galaxy, so you must store them on a separate disk.

After selecting Galaxy Editor, you will be prompted to insert either a disk to be formatted for a new galaxy or a disk with an existing galaxy on it. At this prompt you may select *OK* to continue or *ABORT* to go back to the Main Menu.

When you enter the Galaxy Editor, you will be presented with seven possible options. Use the joystick or SPACE BAR to cycle the selector through the options. The options are as follows:

<u>Option</u>	Function
Edit Fortress	lets you edit a selected fortress.
Test Fortress	lets you test a selected fortress.
Save Fortress As	saves your fortress to disk.
Name Galaxy	lets you name your galaxy (10 letters maximum).
Other Galaxy	lets you change galaxy disks or create a new disk.
Undo Changes To	reverts the fortress in memory to the last saved version on your disk.
Main Menu	exits to the Main Menu.

Each fortress must be assigned an identifying number, from 1-50 (50 is the Magnetron fortress limit). These numbers appear alongside the appropriate options. To select a higher number, press the joystick to the right or use the CRSR left/right arrow key. To select a lower number, press the joystick to the left or use the

CRSR up/down arrow key. When the desired number appears, press the joystick button or the RETURN key and that fortress number will be selected.

Selecting a specific fortress will store it in memory and this will be indicated at the top of the Magnetron Galaxy Editor. You may only store one fortress in memory at a time.

USING THE GALAXY EDITOR

Selecting *Edit Fortress* in the Galaxy Editor will take you to the actual editing screen.

Note: Press the F1 key to return to the previous Galaxy Editor menu.

The Editing Cursor

The editing cursor is represented by two purple squares, one within the other, on the star background. Use the joystick to move the cursor around on screen. When the cursor reaches the edge of the screen, the screen will automatically scroll until the edge of a fortress is reached.

The Selector

The option selector is represented by a green outline around the optional fortress construction piece that is currently selected. Press the joystick to the left or right while holding down the joystick button to cycle the selector through the various pieces.

When the selector is on the desired piece, moving the joystick up and down while holding down the joystick button will cycle you through additional construction pieces the are within the same category. For example, after selecting a "Brittle Wall" piece, moving the joystick up and down while holding down the joystick button will cycle you through different shapes of brittle wall pieces.

The construction piece that is currently selected will also appear at the cursor position.

Placing a Construction Piece

To place a fortress construction piece within your galaxy, do the following:

- 1. Move the editing cursor to the desired location.
- 2. Press the joystick button and then use the selector to select the desired piece.
- 3. Release the joystick button and the piece will be placed.

Erasing Construction Pieces

To erase a construction piece, do one of the following:

- if the piece you wish to erase matches the one currently selected, simply move the addition surger directly selected.
- the editing cursor directly over it and press the joystick button once.
- if the piece you wish to erase does not match the one currently selected, move the editing cursor directly over it and press the joystick button twice.

GALAXY EDITOR CONSTRUCTION PIECES

Walls

There are four different types of walls the properties of which are described in this manual under "Fortress Secrets".

Solid, permeable and brittle walls come in vertical, horizontal, diagonal, corner, "T" and right-angled shapes. Elastic walls come only in vertical and horizontal shapes.

The permeable wall shape collection also contains a blank surface square and outer edges for the fortress.

Cannons

Cannons can be placed vertically, horizontally or diagonally. There is also a surface mounted "four-way" cannon that can fire in all four directions. The direction of fire

can be set for each individual cannon. The rate of fire can be set for all cannons together on a particular fortress.

To set the direction of fire, first place the cannon within your fortress. Then, with the editing cursor over the position of the cannon, press one of the following keys:

<u>Key</u>	Cannon Fires
S	straight
L	to the left
R	to the right
A	in three directions (default setting for all cannons)

If a cannon is changed from the default setting, a letter matching one of the above keys will appear next to the cannon to designate its direction of fire.

To set the rate of fire for every cannon on a fortress, press the **F** key and a box will come on screen in which you may type a number from zero to nine. The number represents the rate of fire with zero being the slowest and nine the fastest. Press RETURN when you are done.

Note: Remember, shooting out a cannon is worth 200 points when playing the game.

Magnetron Generators

There are two different types of Magnetron Generators available and they are represented by the construction piece on the far right side of the editing screen. So that you may readily identify the generators within the editor, they appear differently than they do in the game. The two types of generators are:

Linear Generators

The Linear Magnetron Generators create force in one of four directions, over the entire surface of a base. They are all are hidden and indestructible.

You are limited to one horizontal linear generator and one vertical linear generator on each fortress. Otherwise, the magnetic forces would come into conflict.

As an example of Magnetron Generators placement, when a "down" and a "right" directed Linear Generator are placed on the same base, they will create a combined force drawing you to the lower right corner of the screen.

The Linear Generators will appear as arrows, facing their direction of force.

Circular Generators

Circular Magnetron Generators can have an attracting or repelling force radiating from the center of the generator. They can be set to be either brittle or indestructible. Brittle generators can be destroyed by weapon fire and have the letter "B" on them within the Galaxy Editor.

Circular Generators with a repelling force have an arrow in the upper-left corner pointing away from the generator. Generators with an attracting force do not have any arrows.

Fuel Cells

Fuel cells can be placed anywhere on a fortress. Each fuel cell holds approximately 1500 units of fuel.

Note: Remember, picking up fuel cells with your Photon Fighter is worth **15 points** during the play of the game.

The Photon Fighter

The starting position of the Photon Fighter can be placed anywhere on the fortress. More than one starting place can also be specified. When more than one starting position is placed on a fortress, the program will automatically scan from left to right, top to bottom and start the fighter at the first starting position encountered. When a ship explodes, the program will then start the next ship at the next starting position it encounters, scanning as before.

EDITOR KEYBOARD CONTROLS

The following keys affect the entire fortress and are very useful.

Key	Result
CLR/HOME	clears an entire fortress. (You will be given a warning prompt requiring a Yor N response.)
<	scrolls the screen to the left the width of one editing cursor or "editor block."
>	scrolls the screen to the right one editor block.
-	scrolls the screen up one editor block
+	scrolls the screen down one editor block
F	sets the cannon firing rate on the entire fortress on a scale of 0-9. Type a number between 0 and 9 and then press the RETURN key. See "Cannons" for more information.
В	sets the amount of bonus points on a fortress in the range of 0 to 9000 points. Type a number between 0-9 to represent the number of points in thousands.
E	sets the amount of rebound for all elastic walls on a fortress on a scale of 0 to 9. A rebound setting of "0" gives minimal rebound, a setting of "9" the maximum.
G	sets the force strength of the Magnetron Generators for the entire fortress on a scale of 0 to 9.
М	displays a map of the fortress.

Duplicating Construction Pieces

All of the construction pieces can be duplicated in horizontal, vertical or diagonal rows. They will duplicate over empty space only and will stop if they encounter another construction piece. The following keys perform the specific duplication:

Key Result

H creates a horizontal row.

- V creates a vertical row.
- / creates a diagonal row running left to right and "uphill."
- ? creates a diagonal row running left to right and "downhill."
- F1 returns you to the EDITOR CONTROL screen.

SETTING FORTRESS COLORS

There are eight different color adjustments that can be made to each galaxy. Pressing the appropriate key will affect a particular area as specified below. Pressing the appropriate key repeatedly will cycle you forward through the available colors for that particular area. You may also cycle backward through the colors by pressing the SHIFT key along with the appropriate key.

The keys and the areas they affect are outlined below:

Key	Color Affected
1	fortress surface and stars - the two areas will always be the same color.
2	space background and wall shadows
3	tops of the walls
4	wall highlights
5	gun emplacement
6	fuel cells
7 and 8	fortress edges

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Brøderbund warrants for a period of ninety (90) days following the original retail purchase of this copy of Magnetron that the program is free from substantial errors or defects that will materially interfere with the operation of the program as described in the enclosed user documentation. This policy applies to the initial purchaser only.

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